

Bridge Culvert Inspection			
Bridge File Number	09854 -1 Bridge Culvert	Form Type	CUL1
Year Built	1979	Lot No.	1
Bridge or Town Name	BOYLE	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO FLAT CREEK, 8.11.55.5.8.4, WATERCRS-ST	Inspector Class	BR CLS B
Located On	663:04 C1 27.037	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	08-Mar-2010
Legal Land Location	SE SEC 4 TWP 65 RGE 20 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-112:57:44, 54:35:14	Data Entry Date	25-Mar-2010
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Arnold Assenheimer
Contract Main. Area	CMA07	Review Date	11-Mar-2010
Clear Roadway/Skew	9 / -8 deg. (LHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	860 / 2008 (A)	Dept. Review Date	25-Mar-2010
Road Classification	RCU-209-110	Follow-Up By	
Detour Length (km)	6		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2905	SP	40.2	152X51	3.0	ROUND
Special Features								
Special Features Comment	BF TAG ON TOP OF BEVEL.							

**Utilities (Located at)**

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	
Remarks			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Slight rise to East.
Vertical Alignment		8	7	
Roadway Width (m)	9.000			
Embankment		N	7	
Sideslope (__:1)	3.0			
(Height of Cover (m) : )				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>8</b>	<b>7</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		N	5	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		N	5	
Heaving (mm)	50			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	4	Concrete slabs poured adjacent to shoulder, slab settled 225mm. Some settlement of fill under shoulders & slab but no damage to concrete. photo
(Type : <b>RIP RAP, CONCRETE</b> )				
(Avg. Rock Size (mm) : <b>200</b> )				
Scour/Erosion		N	4	
Beavers (Y/N)	Yes			Dam across inlet.-50% blocked
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): -, Rise (mm): 2905, Type: SP)				
Barrel Last Accessible Date	08-Mar-2010			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	5	(Rise @ R5, 3063; 5.4% deflection. 22/June/2000)
Measured Rise (mm)	3063			Not measured due to ice.
Measured At Ring No.	5			Noticable flattening R5-8.
Sag (mm)	158			Est sag 5%.
Percent Sag	5			
Sidewall		3	5	Small tears in R1 adjacent to shoulder @ approx 3:00, 9:00. photo
Measured Span (mm)	3073			
Measured At Ring No.	6			
Deflection (mm)	168			
Percent Deflection	6			
Floor		N	N	Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	6	
Separation (mm)	0			
Longitudinal Seams		3	N	(Rings 7,8,9 are cracked at 3 o'clock. Steel remaining between bolt holes in ring 9, 83mm. 2000/06/22) Cracks not identified.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	Lower 1/4 has superficial corrosion. Roof plates R1, R4, R7, R9 have corrosion from improper storage.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			Corrosion from water, infiltration on upper seam bolts.-photo
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): -, Rise (mm): 2905, Type: SP)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>3</b>	GR carried fwd.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	6	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size (mm) : )				
Scour/Erosion		N	6	
Beavers (Y/N)	Yes			
<b>Downstream End General Rating</b>		<b>7</b>	<b>6</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	
Bank Stability		N	6	
HWM (m below Top of Culvert)				Not visible
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>5</b>	<b>6</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2010	Re-inspect at low water to verify cracked seams.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>49.0/48.5</b>	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor cracked seams.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy							
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Jason Saly		Previous Assistant's Name				
Next Inspection Date	08-Jun-2013		Previous Inspection Date	04-Dec-2006			
Inspection Cycle (Default) (months)	39						
Comment							